

Application No. 10/789,088

Docket No.: NY-KIT 367-US

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REMARKS

In light of the above-amendment and remarks to follow, reconsideration and allowance of this application are requested.

The specification has been objected to under 35 U.S.C. § 132(a) for allegedly introducing new matter into the disclosure. Claim 7 has been rejected under 35 U.S.C. § 112, first paragraph, as allegedly based on non-enabling disclosure. Applicant respectfully submits that the present invention calls for a reflector unit formed or fabricated independently of the printed circuit board to be surface mounted onto the printed circuit board. If the reflector unit is formed together (i.e., not fabricated independently) with the printed circuit board as seemed to be alleged by the Examiner, then there is absolutely no reason for mounting the reflector unit onto the printed circuit board. However, contrary to the Examiner's attention, the reflector unit formed or fabricated independently of the printed circuit board must be mounted onto the printed circuit board. Applicant kindly directs the Examiner's attention to page 11, lines 11-30 of the specification;

"Next, the construction of the printed circuit board P will be described in greater details with reference to Fig. 5 and Fig. 6. Fig. 5 illustrates a manufacturing process of the printed circuit board P and Fig. 6 illustrates a process of surface-mounting parts thereon. ...

"The surface of the substrate 45 which is formed of aluminum as described above is coated with a ceramic material for forming an insulating ceramic layer 46 (Fig 5(a) and Fig 5(b)). On the top face thereof, a printed circuit wiring (wiring land) W formed of copper foil or a gold foil, etc. and a surface-mounting pad X are formed. (Fig. 5(c)). Further, on the top surface of this printed circuit board P, a resist film 47 made of an insulating resin is formed (Fig. (d)).

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"Then, to this printed circuit board P thus fabricated, there will be surface-mounted the LED elements 9 and a reflector unit 50 ...

Applicant respectfully requests that the objection to the specification and the rejection of claim 7 under 35 U.S.C. § 112, first paragraph be withdrawn.

Claims 11-12 have been objected to because of minor informalities. Applicants have amended claims 11-12 to incorporate the Examiner's kind suggestion and respectfully request that this objection be withdrawn.

Claims 7, 10 and 11 have been rejected under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 5,119,174 to Chen (Chen). Claims 7 and 10-12 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,874,910 to Sugimoto et al. (Sugimoto). Claim 14 have been rejected under 35 U.S.C. § 103 as being unpatentable over either Chen or Sugimoto. Applicant respectfully traverses these rejections.

Applicant respectfully submits that neither Chen nor Sugimoto independently or in combination teaches or suggests a reflector unit "being fabricated independently of said printed circuit board," as required by amended claim 7. This advantageously improves the rigidity of the frame member. Further, the neither Chen nor Sugimoto independently or in combination teaches or suggests a reflector unit "being formed integrally with said frame member so that said reflector unit can be arranged relative to said LED element with accuracy and without change over time to provide a uniform and stable reflecting face configuration," as required by amended claim 7.

Chen describes a PCB having a PCB base 12 and copper foils 21, 22, and a bowl-shaped reflector dish 14 formed from the copper foil 21 on top surface of the PCB base 12. (Figs. 2 and 3; col. 2, lines 12-31).

Similarly, Sugimoto describes that "the printed circuit board 91 is fabricated by providing an insulating layer 913 of, e.g., an epoxy resin and a layer of wiring copper foil on a thin metal substrate 912 of, e.g., aluminum, etching the wiring copper foil layer to

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form a wiring pattern 915, and press forming the assembly to shape a desired number of recesses 911" (Sugimoto, col. 3, lines 1-6).

Hence, contrary to the Examiner assertion, Chen's or Sugimoto's alleged reflector unit (i.e., Chen's reflector dish 14 or Sugimoto's insulating layer 913) is not fabricated independently of the printed circuit board to improve rigidity of the frame member as required by amended claim 7 of the present invention. In fact as admitted by the Examiner, the rigidity of the Chen's and Sugimoto's reflector units rely on the printed circuit board.

Moreover, the Examiner incorrectly asserts that the Chen's reflector unit 14 and Sugimoto's reflector unit allegedly comprising both a reflector and a rigid frame member (as required by the claims of the present invention) are mounted on the printed circuit board. Later in the office action, the Examiner contradicts himself by alleging that the frame member of the Chen's and Sugimoto's reflector unit is part of the printed circuit board 12. Applicant is completely puzzled as to the Examiner's contradictory position, "How can the reflector unit be mounted on the printed circuit board if one of the components of the reflector unit is part of the printed circuit board?" The claims of the present invention require that the reflector unit comprise both a reflector and a rigid frame member. Since the reflector unit is surface mounted on the printed circuit board, this naturally implies that components of the reflector unit (i.e., the reflector and rigid frame member) are also surface mounted on the printed circuit board. Applicant respectfully submits that the Examiner cannot take two opposing views of the same reference to reject the claims. The Examiner cannot allege that the Chen's and Sugimoto's reflector unit is mounted on the printed circuit board in one instance and then allege that the reflector unit (i.e., frame member which is part of the reflector unit) is part of the printed circuit board in another instance.

Additionally, claims of the present invention required that the reflector unit be "formed integrally with said frame member so that said reflector unit can be arranged relative to said LED element with accuracy and without change over time to provide a

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uniform and stable reflecting face." The accuracy of the reflecting surface in Chen depends upon the accuracy of forming the bowl-shaped cavities directly on the printed circuit board. Accordingly, applicant respectfully submits that it is very costly to realize high accuracy with the Chen's device and the size of the reflector (i.e., bowl-shaped cavity) is limited by the thickness of the printed circuit board. Similarly in Sugimoto, the accuracy of the reflector depends upon the accuracy of forming the reflector directly on the printed circuit board. Accordingly, applicant respectfully submits that it is very costly to realize high accuracy with the Sugimoto's device as well.

Moreover, Chen's and Sugimoto's techniques are very costly and the reflector cannot be formed relative to the LED array with accuracy. Accordingly, a light source unit manufactured using Chen's or Sugimoto's technique has little commercial value.

Applicant respectfully submits that only the present invention teaches or suggests a reflector unit formed independently of the printed circuit board and formed integrally with the frame member so that the reflector unit can be arranged relative to the LED element with accuracy and without change over time to provide a uniform and stable reflecting face configuration as required in amended claim 7.

Of course, a rejection based on 35 U.S.C. § 102 as the present case, requires that the cited reference disclose each and every element covered by the claim. *Electro Medical Systems S.A. v. Cooper Life Sciences Inc.*, 32 U.S.P.Q.2d 1017, 1019 (Fed. Cir. 1994); *Lewmar Marine Inc. v. Barient Inc.*, 3 U.S.P.Q.2d 1766, 1767-68 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2D 1051, 1053 (Fed. Cir.), *cert. denied*, 484 U.S. 827 (1987). The Federal Circuit has mandated that 35 U.S.C. § 102 requires no less than "complete anticipation ... [a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 772 F.2d 1542, 1548, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983); *See also, Electro Medical Systems*, 32 U.S.P.Q. 2d at 1019; *Verdegaal Bros.*, 814 F.2d at 631.

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Therefore, since Chen and Sugimoto independently or in combination fails to describe significant elements of recited by claim 7, it follows that Chen and Sugimoto independently or in combination does not anticipate or render obvious claim 7, or any of claims 10-12 and 14 dependent on claim 7.

Further, to establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. 2143. Here, the Examiner has failed to establish a *prima facie* case of obviousness because Chen and Sugimoto independently or in combination does not teach or suggest all the claim limitations of amended claim 7 as discussed herein and also included in dependent claims 10-12 and 14.

"To imbue one of ordinary skill in the art with knowledge of the present invention, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim of the insidious effect of hindsight syndrome, wherein that which only the inventor taught is used against the teacher." W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553 (Fed. Cir. 1983). In the present case, none of the references teach or suggest a reflector unit formed independently of the printed circuit board and formed integrally with the frame member so that the reflector unit can be arranged relative to the LED element with accuracy and without change over time to provide a uniform and stable reflecting face configuration as required in amended claim 7 (and also included in dependent claims 10-12 and 14). Applicants respectfully submit that the Examiner has failed to establish the basic requirements of a *prima facie* case of obviousness for claims 7, 10-12 and 14.

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Moreover, none of the cited references are directed to the problem solved by the present invention. "[T]he mere fact that the prior art can be modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." In re Laskowski, 871 F.2d 115, 117 (Fed. Cir. 1989) (quoting In re Gordon, 733 F.2d 900, 902 (Fed. Cir. 1984)). Therefore, the Examiner has filed to establish a *prima facie* case of obviousness for claims 7, 10-12 and 14.

On the basis of the above amendment and remarks, reconsideration and allowance of claims 7, 10-12 and 14 are respectfully requested. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0624, under Order No. NY-KIT 367-US (10402619) from which the undersigned is authorized to draw.

Respectfully submitted,

By 

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